

Refine Search

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Terms	Documents
L1.clm.	12

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Terms	Documents
((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	66

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	<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>		
<u>L1</u>	((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	66	<u>L1</u>

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	9

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<i>DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
<u>L2</u>	((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	9	<u>L2</u>
<i>DB=PGPB,USPT,USOC; PLUR=YES; OP=OR</i>			
<u>L1</u>	((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3	66	<u>L1</u>

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Search Results -

Terms	Documents
(709/216 709/220 709/230 709/250 709/226 370/351 370/357 370/362 370/386 370/399 710/305 710/313 710/316 710/317 710/105 710/33 710/36 714/4).ccls.	17110

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[Set](#)[Name Query](#)[side by](#)[side](#)*DB=PGPB,USPT,USOC; PLUR=YES; OP=OR*L4 710/305,313,316,317,105,33,36;709/216,220,230,250,226;370/351,357,362,386,399;714/4.ccls.L3 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3*DB=PGPB; PLUR=YES; OP=OR*L2 L1.clm.L1 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L1 and L4	7

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L5 ▲
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DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L5 L1 and L4

L4 710/305,313,316,317,105,33,36;709/216,220,230,250,226;370/351,357,362,386,399;714/4.ccls.

L3 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

DB=PGPB; PLUR=YES; OP=OR

L2 L1.clm.

L1 ((operating adj1 system adj1 domain\$1) or OSD) same port same switch\$3

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» Key

IEEE JNL IEEE Journal or Magazine

IEE JNL IEE Journal or Magazine

IEEE CNF IEEE Conference Proceeding

IEE CNF IEE Conference Proceeding

IEEE STD IEEE Standard

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 Kleiman, S.R.; Williams, D.;
[Comcon Spring '88. Thirty-Third IEEE Computer Society International Conference Papers](#)
 29 Feb.-3 March 1988 Page(s):289 - 293
 Digital Object Identifier 10.1109/CMPCON.1988.4876
[AbstractPlus](#) | Full Text: [PDF](#)(368 KB) IEEE CNF
[Rights and Permissions](#)
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 Niznik, C.;
[Communications, IEEE Transactions on \[legacy, pre - 1988\]](#)
 Volume 30, Issue 1, Part 1, Jan 1982 Page(s):19 - 27
[AbstractPlus](#) | Full Text: [PDF](#)(920 KB) IEEE JNL
[Rights and Permissions](#)
- ☐ 3. **KNITS: switch-based connection hand-off**
 Papathanasiou, A.E.; Van Hensbergen, E.;
[INFOCOM 2002. Twenty-First Annual Joint Conference of the IEEE Computer Communications Societies. Proceedings. IEEE](#)
 Volume 1, 23-27 June 2002 Page(s):332 - 341 vol.1
 Digital Object Identifier 10.1109/INFCOM.2002.1019275
[AbstractPlus](#) | Full Text: [PDF](#)(245 KB) IEEE CNF
[Rights and Permissions](#)
- ☐ 4. **EtheReal: a host-transparent real-time Fast Ethernet switch**
 Varadarajan, S.; Chiueh, T.;
[Network Protocols, 1998. Proceedings. Sixth International Conference on](#)
 13-16 Oct. 1998 Page(s):12 - 21
 Digital Object Identifier 10.1109/ICNP.1998.723721
[AbstractPlus](#) | Full Text: [PDF](#)(108 KB) IEEE CNF
[Rights and Permissions](#)
- ☐ 5. **A comparative study of some network subsystem organizations**
 Ponomarev, D.V.; Ghose, K.;
[High Performance Computing, 1998. HIPC '98. 5th International Conference O](#)
 17-20 Dec. 1998 Page(s):436 - 443

Digital Object Identifier 10.1109/HIPC.1998.738019

[AbstractPlus](#) | Full Text: [PDF\(84 KB\)](#) IEEE CNF
[Rights and Permissions](#)

- ☐ **6. ATM based video and audio codecs**
Nicolaou, C.;
[ATM in Professional and Consumer Applications \(Digest No: 1997/113\), IEE C](#)
23 May 1997 Page(s):3/1 - 3/6
[AbstractPlus](#) | Full Text: [PDF\(340 KB\)](#) IEE CNF
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- ☐ **7. Performance evaluation of ring-structure register file in multimedia applic**
Tay-Jyi Lin; Chi-Chi Chang; Tsung-Hsun Yang; Yu-Ming Chang; Chien-Hung L
Lee; Hung-Yueh Lin; Chein-Wei Jen;
[Multimedia and Expo, 2003. ICME '03. Proceedings. 2003 International Confer](#)
Volume 1, 6-9 July 2003 Page(s):1 - 121-4 vol.1
Digital Object Identifier 10.1109/ICME.2003.1220869
[AbstractPlus](#) | Full Text: [PDF\(391 KB\)](#) IEEE CNF
[Rights and Permissions](#)

- ☐ **8. Development of real-time simulator using traffic monitoring**
Saito, H.; Ohara, H.; Satoh, D.;
[Communications, 2000. ICC 2000. 2000 IEEE International Conference on](#)
Volume 1, 18-22 June 2000 Page(s):195 - 199 vol.1
Digital Object Identifier 10.1109/ICC.2000.853091
[AbstractPlus](#) | Full Text: [PDF\(376 KB\)](#) IEEE CNF
[Rights and Permissions](#)

- ☐ **9. A World-Wide Web server on a multicomputer system**
Chun-Hsing Wu; Chun-Chao Yeh; Jie-Yong Juang;
[Parallel Architectures, Algorithms, and Networks, 1996. Proceedings. Second I](#)
[Symposium on](#)
12-14 June 1996 Page(s):522 - 528
Digital Object Identifier 10.1109/ISPAN.1996.509035
[AbstractPlus](#) | Full Text: [PDF\(700 KB\)](#) IEEE CNF
[Rights and Permissions](#)

- ☐ **10. A generic software platform for local ATM networking**
Lalgudi, H.; Xiaoqiang Chen; Kumar, V.;
[Global Telecommunications Conference, 1995. GLOBECOM '95., IEEE](#)
Volume 3, 13-17 Nov. 1995 Page(s):1967 - 1971 vol.3
Digital Object Identifier 10.1109/GLOCOM.1995.502750
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Dept. of Comput. Sci., State Univ. of New York, Stony Brook, NY, USA;

This paper appears in: [Network Protocols, 1998. Proceedings. Sixth International Conference on](#)

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Abstract

Distributed multimedia applications require guaranteed quality of service (QoS) from the network. This paper describes the design, implementation, and evaluation of a real-time Fast Ethernet switch, EtheReal, that provides bandwidth guarantees to real-time applications running on Ethernet. The modification to the hardware and operating system on the host machines. At the heart of the architecture is a novel real-time connection setup protocol that is completely transparent to the OS, and thus allows the switch to be deployed in a network of heterogeneous machines and platforms. The only dependency of EtheReal on the hosts is their support for TCP/UDP/IP. EtheReal switch uses an Ethernet address swapping technique for real-time packets, simplifying the complexity of maintaining a global connection ID space. Because of the inherent CRC support in Ethernet hardware, this technique significantly reduces the total processing overhead for connection establishment at higher network layers. The current EtheReal switch prototype is fully operational on off-the-shelf PC hardware. It is capable of supporting up to 640 Mbits/sec across 4 ports with a connection establishment overhead of 0.1-0.6 msec and a 10 µs non-real-time packet latency.

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Author Keywords

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References

No references available on IEEE Xplore.

Citing Documents

- 1 Time-utility function-driven switched Ethernet: packet scheduling algorithm, implemer analysis, Wang, J.; Binoy Ravindran
Parallel and Distributed Systems, IEEE Transactions on
On page(s): 119- 133, Volume: 15, Issue: 2, Feb 2004
[Abstract](#) | Full Text: [PDF](#) (1677)
- 2 Ethernet-based real-time and industrial communications, Decotignie, J.-D.
Proceedings of the IEEE
On page(s): 1102- 1117, Volume: 93, Issue: 6, June 2005
[Abstract](#) | Full Text: [PDF](#) (368)
- 3 FTT-Ethernet: a flexible real-time communication protocol that supports dynamic QoS Ethernet-based systems, Pedreiras, P.; Gai, P.; Almeida, L.; Buttazzo, G.C.
Industrial Informatics, IEEE Transactions on
On page(s): 162- 172, Volume: 1, Issue: 3, Aug. 2005
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